Assessing Vegetation Restoration Opportunities for a Northern Region Resources Planning Act Alternative using Forest Inventory and Assessment Permanent Plot Data and the Landscape Model, Simulating Vegetative Patterns and Processes at Landscape Scales.

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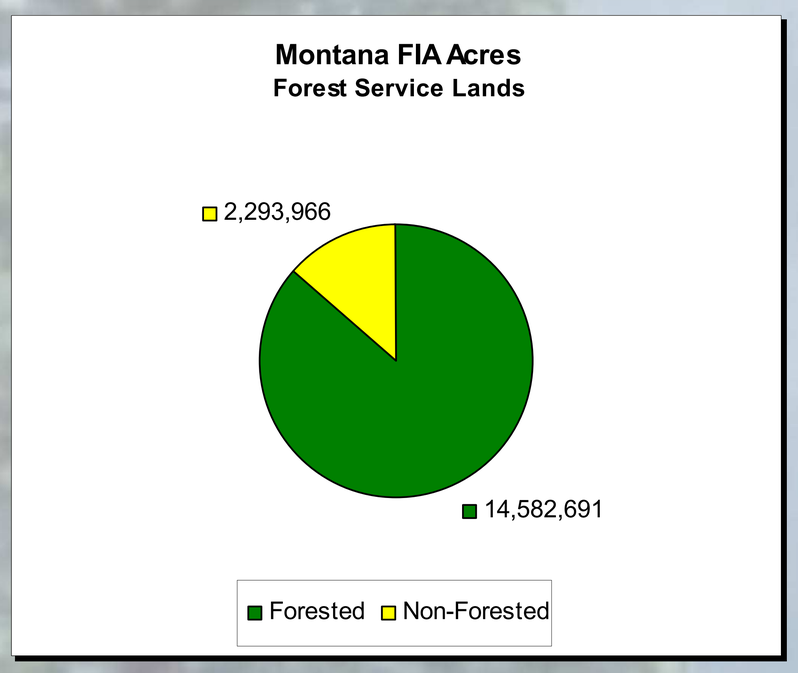
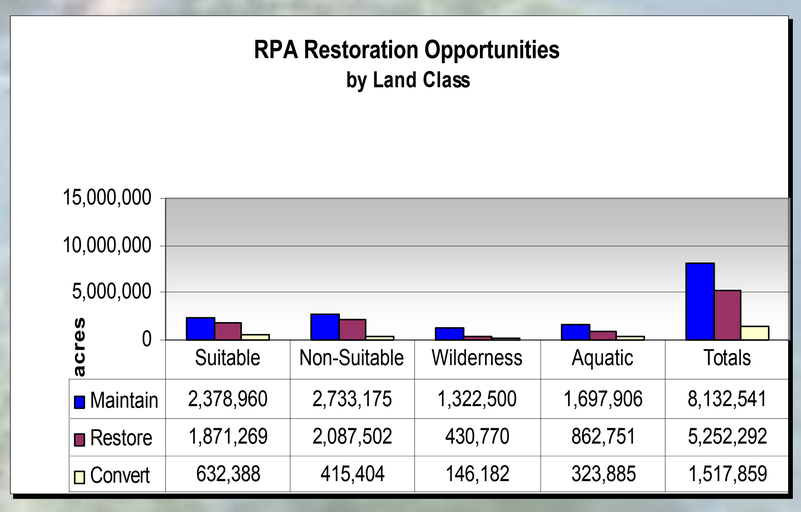
Montana has 2,343-forested FIA plots on land administered by the US forest Service representing nearly 15 million acres. The question of setting priorities for the types of treatments needed to achieve sustainable forest management for the RPA assessment was raised and how FIA data might be used. This pilot analysis is one approach that has been developed. It uses two steps. First the plots are categorized using historic fire regimes, plot metrics such as density, structure and forest type, and wildlife species at risk. Summaries of these categories represent various vegetation restoration, maintenance and conversion treatments opportunities to achieve land management objectives. The second step involved using the SIMPPLE model on a sampling of landscapes to characterize spatial relationships.

Maintenance opportunities **are relatively low cost operations such as deferring treatment for greater than two decades or using wildland prescription fire for resource benefit with no pre-treatment of fuels. There is little or no change in forest type or density.**

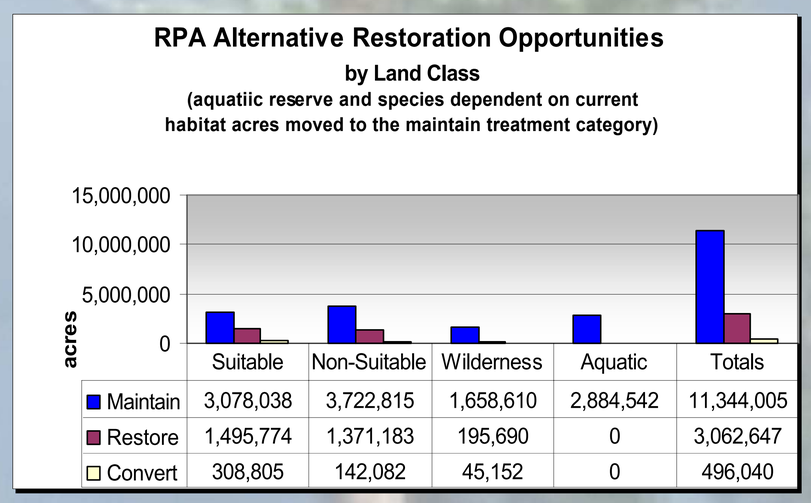
Restoration opportunities **are vegetative conditions that when compared to management objectives, require pre-treatment such as thinning, prior to the use of wildland prescription fire. Forest type and/or density may change with treatment.**

Conversion opportunities **require replacing a current forest type due to it's relative departure from historical conditions, by using regeneration harvests or stand replacing fire followed by reforestation of intolerant species such as ponderosa pine, western larch, rust resistant western white pine, whitebark pine, lodgepole pine or aspen. Forest type and/or density will change with treatment.**

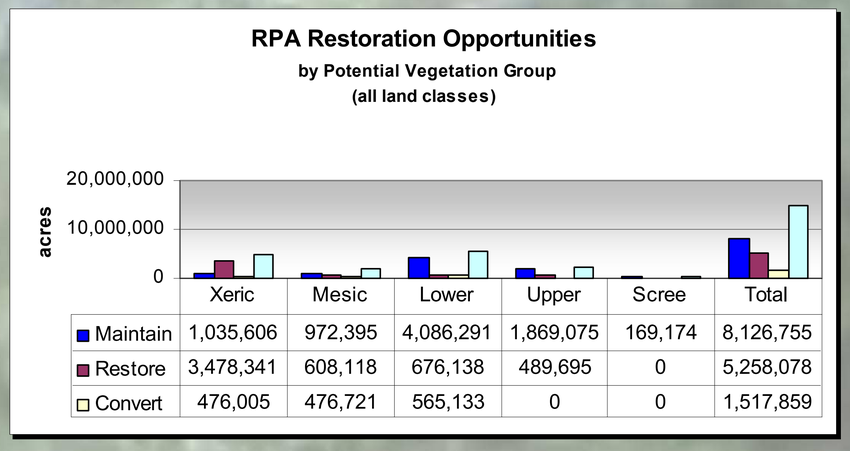




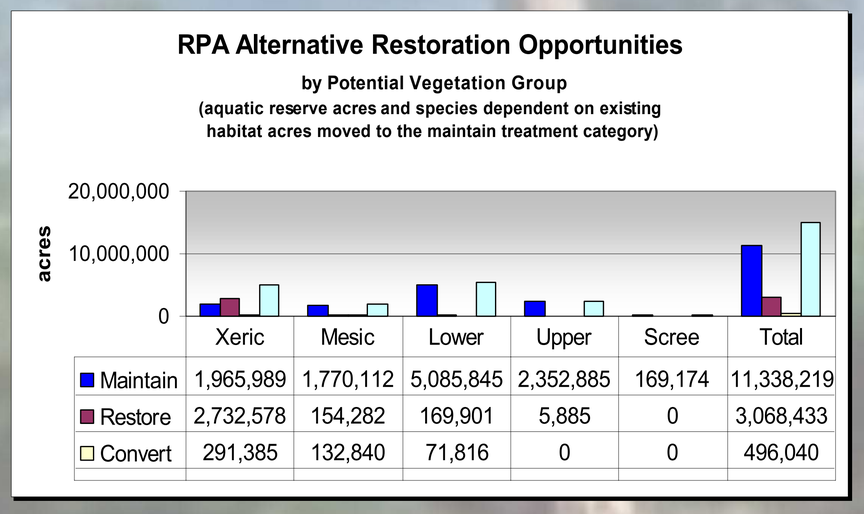
	Suitable	Non-Suitable	Wilderness	Aquatic	Totals
Maintain	2,378,960	2,733,175	1,322,500	1,697,906	8,132,541
Restore	1,871,269	2,087,502	430,770	862,751	5,252,292
Convert	632,388	415,404	146,182	323,885	1,517,859



	Suitable	Non-Suitable	Wilderness	Aquatic	Totals
Maintain	3,078,038	3,722,815	1,658,610	2,884,542	11,344,005
Restore	1,495,774	1,371,183	195,690	0	3,062,647
Convert	308,805	142,082	45,152	0	496,040



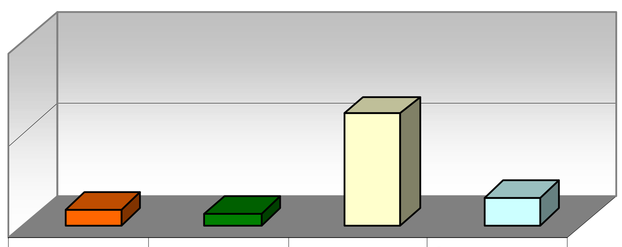
	Xeric	Mesic	Lower	Upper	Scree	Total
Maintain	1,035,606	972,395	4,086,291	1,869,075	169,174	8,126,755
Restore	3,478,341	608,118	676,138	489,695	0	5,258,078
Convert	476,005	476,721	565,133	0	0	1,517,859



	Xeric	Mesic	Lower	Upper	Scree	Total
Maintain	1,965,989	1,770,112	5,085,845	2,352,885	169,174	11,338,219
Restore	2,732,578	154,282	169,901	5,885	0	3,068,433
Convert	291,385	132,840	71,816	0	0	496,040

FIA plots representing habitat for wildlife species at risk have been summarized. For example, habitat characteristics of the flammulated owl, open stands of large ponderosa pine, were matched to existing FIA plots data for existing and potential habitat through treatment. The number of acres indicates the FIA plots representing characteristics currently achieving owl habitat and those acres that potentially would achieve owl habitat with treatment.

Flammulated Owl Existing & Potential Habitat



	Habitat Ac	Maintain	Restore	Convert
	Current	Dependent on Treatment Acres		
Flammulated Owl Acres	81,470	59,676	608,385	148,854

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